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Final Report

Adit & Shaft Project, Phase 12
Granite County, Montana
Philipsburg Area Sites
IFB 4828-G

January, 1987

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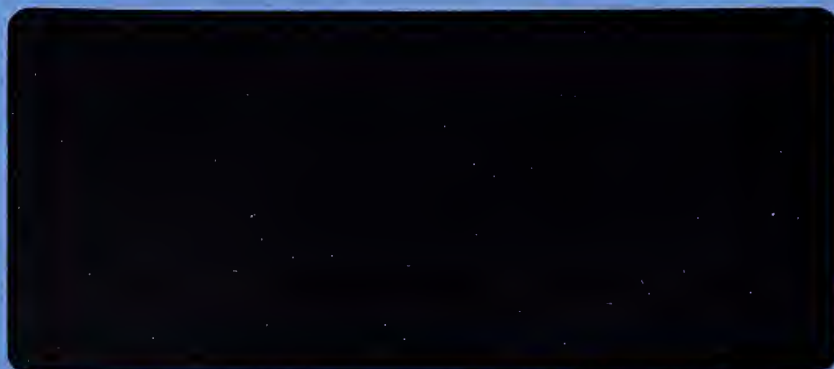
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Final Report

Adit & Shaft Project, Phase 12
Granite County, Montana
Philipsburg Area Sites
IFB 4828-G

January, 1987

Prepared for: Mr. Richard Juntunen, Chief
Abandoned Mine Reclamation
Bureau
Department of State Lands
1625 11th Ave.
Helena, MT 59620

Prepared by: L.C. Hanson Company
Consulting Engineers
P.O. Box 299
Helena, MT 59624

Project Inspector: Joseph Murphy

I. Introduction

A. Project Objectives

The Phase 12 Adit & Shaft Project was undertaken to eliminate the public safety hazards resulting from unreclaimed mine openings at several abandoned hardrock mines in Granite County, Montana. Closure of dangerous shafts and adits through backfilling, bulkhead installation, and/or fencing was accomplished to eliminate accidental entry.

B. Project Location

The project covered sixteen sites located near Philipsburg, Montana. Legal descriptions are listed below and site locations are shown on the vicinity map contained herein.

Philipsburg Mining District

Basin Lode Site	T7N R14W Sec. 25 NE
Bay Horse Site	T7N R13W Sec. 30 NE
Chicago Site	T7N R13W Sec. 19 SE
Climax Site	T7N R13W Sec. 29 SW
Gertrude - Bryant Site	T7N R13W Sec. 30 Center
Granite Mountain Site	T7N R13W Sec. 31 NE & 32 SW
Grey Site	T7N R13W Sec. 30 NW
Headlight Site	T7N R13W Sec. 30 NE
Hope Hill Site	T7N R13W Sec. 19 SE
I.B. Site	T7N R13W Sec. 19 SE
Lucy Site	T7N R13W Sec. 30 NW
Mary B. Site	T7N R14W Sec. 25 NE
Mountain View Site	T7N R13W Sec. 30 NW
Star Pointer Site	T7N R14W Sec. 25 NE
Trout - Scratch All Site	T7N R13W Sec. 30 SE
True Site	T7N R13W Sec. 30 NW

C. History

Hardrock mining has taken place in Montana since 1862 and was essentially unregulated from a reclamation standpoint for over one hundred years. This resulted in thousands of hazardous shafts and adits in mining districts across the state.

A brief history of the Philipsburg Mining District follows:

The Hope mine was discovered in 1864. In 1867 a mill was built leading to other mines in the area being exploited. The period of greatest prosperity was from 1881 to 1893 when Philipsburg became one the most important silver producing districts in the United States credited with over \$39,000,000. Manganese became an important product after 1916 and reopened the mines which were active into the 1960's.

D. Site Description And Problems

The sites included in this project are located in or near the residential area, historic sites, close to public roads or in recreation areas. All mine openings threatened public safety. The shafts involved were of depth great enough to prevent unaided escape upon entry. Adits were reclaimed or bulkheaded to protect the curious from unsuspected dangers.

II. Description of Project Reclamation

A. Project Planning

Backfill was recommended for all mine openings to permanently eliminate the hazards. Many landowners refused to allow this, insisting instead on accessing bulkheads or fencing. These techniques do accomplish the goals of preventing accidental entry but are semi-permanent in nature and may require maintenance in the future.

B. Chronological History

Pre-Bid Conference	April 30, 1985
Bid Opening	May 15, 1985
Contract Award	May 16, 1985
Contract Awarded To:	

Farm Harvesting West
P.O. Box 1050
Eureka, MT 59917
(406)296-3116

Pre-Construction Meeting	June 4, 1985
Notice to Proceed	June 10, 1985
Began Work	June 4, 1985
Project Completed	August 1, 1985

C. Equipment

Air Compressor with Air Drill
Dozer

D. Construction Operations

The Contractor performed the following:

1. Backfilled 8 adits
2. Backfilled 6 shafts
3. Installed 2 - 6'x 6' adit doors
4. Installed 3 wood shaft covers (4'x 6', 8'x 5', 4'x 6')
5. Installed 6' chainlink fence at 1 site
6. Installed combination barbed and woven wire fence at 10 sites
7. Revegetated all areas disturbed by construction activities

III. Cost Summary

A. Final Payment Request

A copy of the Final Payment Request is contained in Appendix A. That document contains the final quantities and costs for each work item.

B. Change Order

No Change Orders were executed during the course of the project.

C. Cost Per Site / Unit

The following summary describes the work performed (with estimated or measured quantities) and the total cost for each site:

- | | |
|---------------------------------------------|-------------|
| 1. Basin Lode Site | \$ 6,279.00 |
| a. Backfill 2 adits & 1 shaft
(342 c.y.) | |
| b. Seed, fertilize & mulch | |



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|-----|------------------------------------------|-------------|
| 2. | Bay Horse Site | \$ 1,069.00 |
| | a. Install wire fence (3.7 rods) | |
| | b. Install hazard signs (2 each) | |
| | c. Install wood shaft cover (4'x 6') | |
| | d. Seed, fertilize & mulch | |
| 3. | Chicago Site | \$ 1,015.00 |
| | a. Remove existing fence | |
| | b. Install wire fence (12.3 rods) | |
| | c. Install hazard signs (8 each) | |
| | d. Seed, fertilize & mulch | |
| 4. | Climax Site | \$ 755.00 |
| | a. Install wood shaft cover (8'x 5') | |
| | b. Seed, fertilize & mulch | |
| 5. | Gertrude-Bryant Site | \$ 1,984.00 |
| | a. Backfill 1 shaft (55 c.y.) | |
| | b. Install wire fence (12 rods) | |
| | c. Install hazard signs (3 each) | |
| | d. Seed, fertilize & mulch | |
| 6. | Granite Mountain Site | \$ 3,427.00 |
| | a. Install wire fence (47.4 rods) | |
| | b. Install hazard signs (16 each) | |
| | c. Seed, fertilize & mulch | |
| 7. | Grey Site | \$ 4,010.00 |
| | a. Install 6' chainlink fence (132 l.f.) | |
| | b. Install hazard signs (4 each) | |
| | c. Install adit door (6'x 6') | |
| | d. Seed, fertilize & mulch | |
| 8. | Headlight Site | \$ 3,609.00 |
| | a. Install wire fence (28.7 rods) | |
| | b. Install hazard signs (19 each) | |
| | c. Install adit door (6'x 6') | |
| | d. Seed, fertilize & mulch | |
| 9. | Hope Hill Site | \$ 8,335.00 |
| | a. Install wire fence (104.6 rods) | |
| | b. Install hazard signs (41 each) | |
| | c. Install wood shaft cover (4'x 6') | |
| | d. Seed, fertilize & mulch | |
| 10. | I.B. Lode Site | \$ 1,437.00 |
| | a. Backfill 2 shafts (74 c.y.) | |
| | b. Seed, fertilize & mulch | |

11.	Lucy Site	\$ 2,720.00
	a. Backfill 6 adits & 1 shaft (145 c.y.)	
	b. Seed, fertilize & mulch	
12.	Mary B. Site	\$ 1,780.00
	a. Backfill 1 shaft (93 c.y.)	
	b. Seed, fertilize & mulch	
13.	Mountain View Site	\$ 3,152.00
	a. Install wire fence (28.4 rods)	
	b. Install hazard signs (4 each)	
	c. Seed, fertilize & mulch	
14.	Star Pointer Site	\$ 401.00
	a. Install wire fence (4.4 rods)	
	b. Install hazard signs (3 each)	
	c. Seed, fertilize & mulch	
15.	Trout-Scratch All Site	\$ 1,278.00
	a. Install wire fence (15.4 rods)	
	b. Install hazard signs (9 each)	
	c. Seed, fertilize & mulch	
16.	True Site	\$ 495.00
	a. Install wire fence (5.9 rods)	
	b. Install hazard signs (4 each)	
	c. Seed, fertilize & mulch	

	Total Project Cost	\$ 41,746.00

IV. Summary

A. Completed Reclamation

The required work was completed within the Contract time allowed.

The project resulted in the complete plugging of some adits and shafts and limits access to other adits and shafts by installed doors, covers and fences. Hazard signs were installed where appropriate. Revegetation of disturbed areas was accomplished.

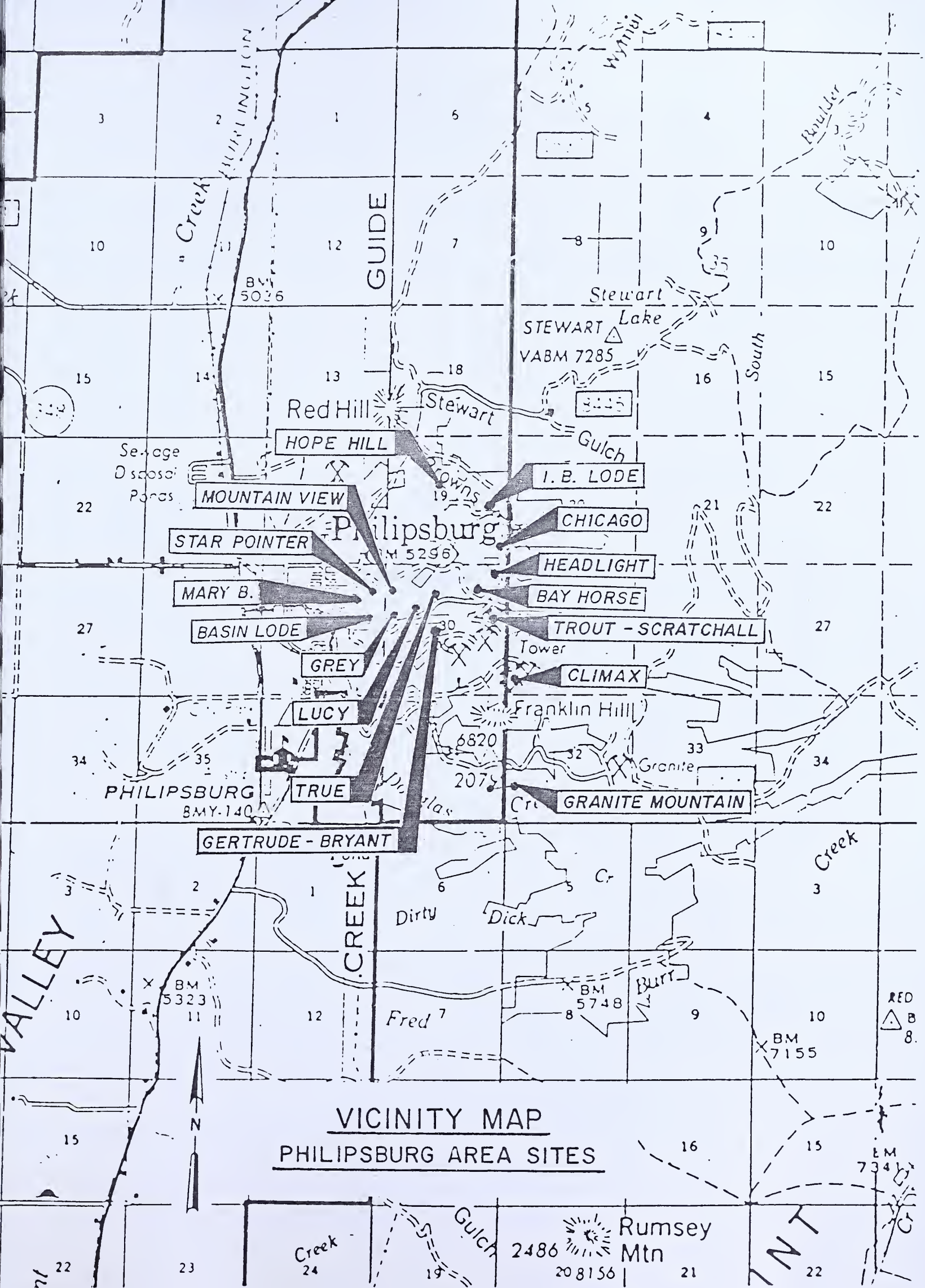
B. Comments

The Contractor completed the work as specified.

Monitoring of all sites should be undertaken periodically to insure all backfilling and fencing work and revegetation efforts remain intact.

V. Slides

The slide log and slides are contained in Appendix B.



APPENDIX A

FROM June 21, 1985 TO August 1, 1985

PROJECT NAME ADIT & SHAFT PROJECT, PHASE 12 - PHILIPSBURG AREA

LOCATION GRANITE COUNTY, MONTANA PROJ. NO. IFB 4828-G

NAME OF CONTRACTOR FARM HARVESTING WEST ADDRESS HIGHWAY 93 N PO BOX 1050
EUREKA, MT 59917

CHANGE ORDERS			CONTRACT STATUS			
No.	Description	Amount	Total Amount	Completed Amount	Uncompleted Amount	Per Cent Complete
			47,512.49	41,746.02	-0-	100
Total Change Orders			-0-	-0-		
CONTRACT TO DATE INCLUDING CHANGE ORDERS			47,512.49	41,746.02	-0-	100

TOTAL RETAINAGE \$
SECURITIES ON DEPOSIT \$
ADJUSTED RETAINAGE \$

*For use only when securities are on deposit in lieu of 10% retainage.

COMPLETED TO DATE \$ 41,746.02
PLUS MATERIALS ON SITE \$ -0-
TOTAL COMPLETED TO DATE \$ 41,746.02
* 0% OR ADJUSTED RETAINAGE \$ -0-
TOTAL AMOUNT EARNED TO DATE \$ 41,746.02
LESS PREVIOUS PAYMENTS \$ 20,247.56
AMOUNT DUE THIS PAYMENT \$ 21,498.46
LESS 1% TAX \$ 214.98
TOTAL DUE CONTRACT \$ 21,283.48

I certify that this claim is correct and just in all respects and that payment or credit has not been received.

Farm Harvesting West

(Contractor)

By Alfred Johnson

Date 8/8/85

RECOMMENDED BY:

L. C. Hanson Company

(Engineer)

By James D. Schmitt

Date 8/12/85

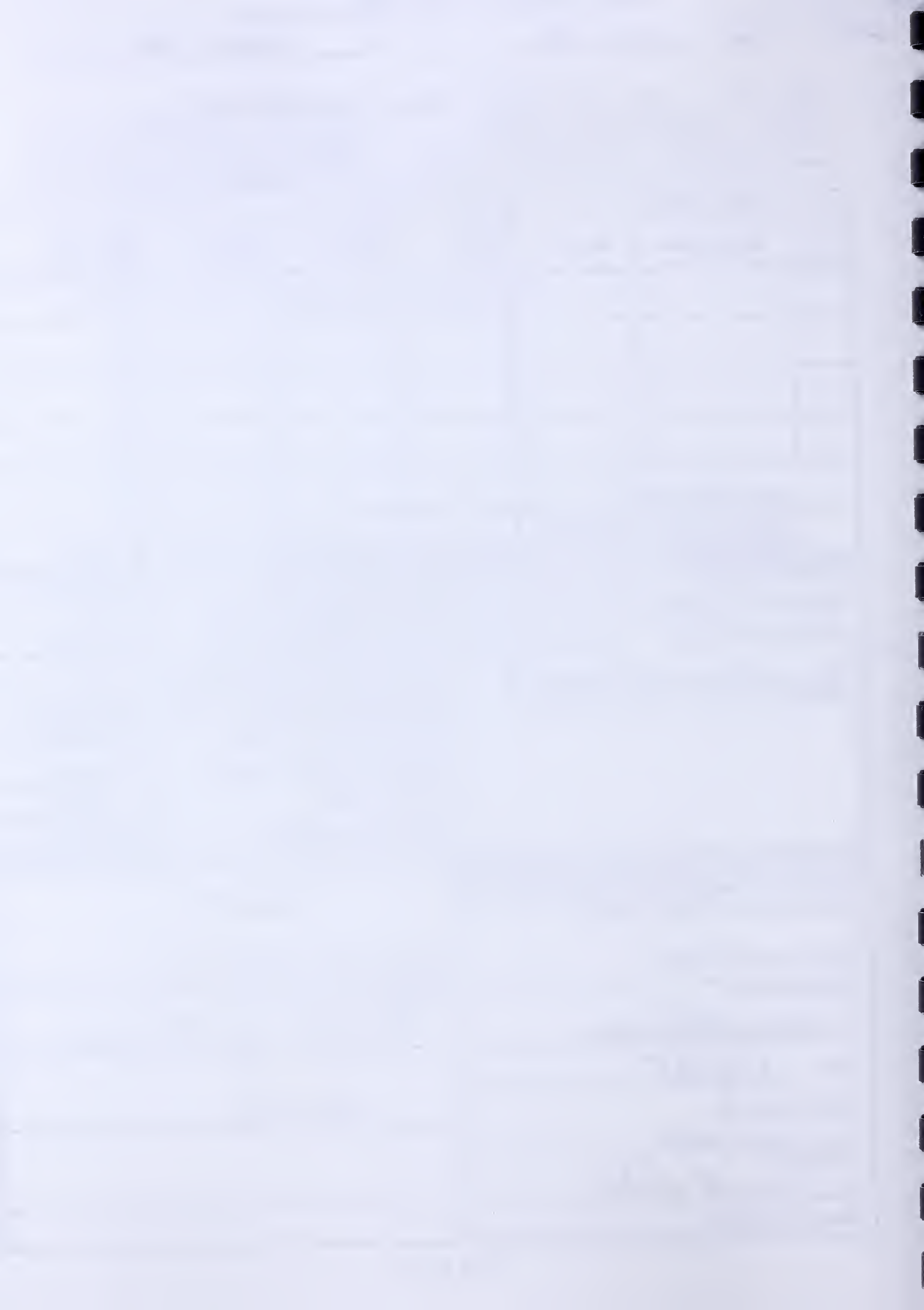
Approved By:

Montana Dept. of State Lands

Owner

Richard D. Smith

8/12/85



ITEMIZATION OF QUANTITIES AND COSTS

ITEM	DESCRIPTION	QUANTITY	UNIT PRICE	WORK COMPLETED TO DATE	COST COMPLETED WORK	PERCENT COMPLETE
1.	BACKFILL MINE OPENINGS	LUMP SUM	12,809.00	LUMP SUM	12,809.00	100
2.	WIRE FENCE - TYPE CW OR CM	322 RODS	58.61	262.8 RODS	15,402.71	100
3.	SINGLE PANEL - TYPE CW	12 EACH	15.60	7 EACH	109.20	100
4.	DOUBLE PANEL - TYPE CW	129 EACH	30.13	103 EACH	3,103.39	100
5.	GATE - METAL 4' HEIGHT	10 L.F.	120.00	10 L.F.	1,200.00	100
6.	DEADMAN	10 EACH	18.00	11 EACH	198.00	100
7.	FENCE - CHAIN LINK 6'	210 L.F.	16.71	132 L.F.	2,205.72	100
8.	DOUBLE PANEL - 6' CHAIN LINK	5 EACH	96.00	5 EACH	480.00	100
9.	WOOD SHAFT COVER	3 EACH	720.00	3 EACH	2,160.00	100
10.	ADIT DOOR - TYPE "A" GRID	2 EACH	1,200.00	2 EACH	2,400.00	100
11.	INSTALL STATE-FURNISHED SIGNS	138 EACH	6.00	113 EACH	678.00	100
12.	SEEDING, FERTILIZING, MULCHING	LUMP SUM	*1,000.00	LUMP SUM	1,000.00	100
		TOTAL			<u>\$41,746.02</u>	
	* State-established price					

APPENDIX B

Phase 12 Adit & Shaft Project
Philipsburg Mining District, Granite County
Slide Log

1. Aug., 1984	Before:	Basin Lode shaft - backfill site
2. Aug., 1984	Before:	Basin Lode shaft - backfill site
3. Aug., 1984	Before:	Basin Lode adit #1 - backfill site
4. Aug., 1984	Before:	Basin Lode adit #1 - backfill site
5. Aug., 1984	Before:	Basin Lode adit #2 - backfill site
6. Aug., 1984	Before:	Bay Horse shaft #1 - wood cover site
7. Aug., 1984	Before:	Bay Horse shaft #2 - fence site
8. Aug., 1984	Before:	Chicago shaft #1 - fence site
9. Aug., 1984	Before:	Chicago shaft #1 - fence site
10. Nov., 1984	Before:	Chicago shaft #2 - fence site
11. Nov., 1984	Before:	Chicago shaft #3 - fence site
12. Sept., 1984	Before:	Climax shaft - wood cover site
13. Sept., 1984	Before:	Climax shaft - wood cover site
14. Aug., 1984	Before:	Gertrude-Bryant shaft #1 - backfill site
15. Aug., 1984	Before:	Gertrude-Bryant shaft #2 - fence site
16. Sept., 1984	Before:	Granite Mountain shaft #1 - fence site
17. Sept., 1984	Before:	Granite Mountain shaft #2 - fence site
18. Sept., 1984	Before:	Granite Mountain shaft #3 - fence site
19. Sept., 1984	Before:	Granite Mountain shaft #3 - fence site
20. Sept., 1984	Before:	Granite Mountain shaft #4 - fence site
21. Sept., 1984	Before:	Granite Mountain shaft #4 - fence site
22. July, 1983	Before:	Grey shaft #1 - fence site
23. July, 1983	Before:	Grey shaft #1 - fence site
24. July, 1983	Before:	Grey shaft #1 - fence site
25. July, 1983	Before:	Grey site - oreshoot
26. July, 1983	Before:	Grey adit #2 - adit door site
27. July, 1983	Before:	Grey adit #2 - view
28. July, 1983	Before:	Grey adit #3 - lock for existing adit door
29. Aug., 1984	Before:	Headlight shaft #2 - fence site
30. Aug., 1984	Before:	Headlight shaft #2 - fence site
31. Aug., 1984	Before:	Headlight shaft #3 - fence site
32. Aug., 1984	Before:	Headlight shaft #5 - fence site
33. Aug., 1984	Before:	Headlight pit - fence site
34. Aug., 1984	Before:	Headlight adit - adit door site
35. July, 1984	Before:	Hope Hill shaft #1 - fence site
36. July, 1984	Before:	Hope Hill shaft #2 - fence site
37. July, 1984	Before:	Hope Hill shaft #2 - fence site
38. Aug., 1984	Before:	Hope Hill shaft #3 - fence site
39. Aug., 1984	Before:	Hope Hill shaft #4 - fence site
40. Aug., 1984	Before:	Hope Hill shaft #4 - fence site
41. Aug., 1984	Before:	Hope Hill shaft #5 - fence site
42. Aug., 1984	Before:	Hope Hill shaft #5 - fence site
43. Aug., 1984	Before:	Hope Hill shaft #6 - fence site
44. Aug., 1984	Before:	Hope Hill shaft #7 - fence site
45. Aug., 1984	Before:	Hope Hill shaft #8 - fence site
46. July, 1984	Before:	Hope Hill shaft #8B - fence site
47. July, 1984	Before:	Hope Hill shaft #8C - fence site

48. July, 1984	Before: Hope Hill shaft #8D - fence site
49. July, 1984	Before: Hope Hill shaft #9 - fence site
50. July, 1984	Before: Hope Hill shaft #9 - fence site
51. July, 1984	Before: Hope Hill shaft #9B - fence site
52. July, 1984	Before: Hope Hill shaft #10 - fence site
53. July, 1984	Before: Hope Hill shaft #10 - fence site
54. July, 1984	Before: Hope Hill shaft #11 - fence site
55. Aug., 1984	Before: Hope Hill shaft #11 - fence site
56. Aug., 1984	Before: Hope Hill shaft #12 - fence site
57. July, 1984	Before: Hope Hill shaft #12 - fence site
58. July, 1984	Before: Hope Hill shaft #13 - fence site
59. Aug., 1984	Before: Hope Hill shaft #13 - fence site
60. Aug., 1984	Before: Hope Hill shaft #14 - fence site
61. Aug., 1984	Before: I.B. Lode shaft - backfill site
62. Sept., 1983	Before: Lucy site - oreshoot
63. Sept., 1983	Before: Lucy adit #1 - backfill site
64. Sept., 1983	Before: Lucy adit #2 - backfill site
65. Sept., 1983	Before: Lucy adit #3 - backfill site
66. Sept., 1983	Before: Lucy adit #4 - backfill site
67. Sept., 1983	Before: Lucy adit #5 - backfill site
68. Sept., 1983	Before: Lucy adit #6 - backfill site
69. July, 1984	Before: Mary B. site - view of mine
70. July, 1984	Before: Mary B. shaft - backfill site
71. July, 1984	Before: Mary B. shaft - backfill site
72. July, 1984	Before: Mary B. shaft - backfill site
73. Aug., 1984	Before: Mountain View stope - fence site
74. Aug., 1984	Before: Star Pointer shaft - fence site
75. Aug., 1984	Before: Trout-Scratch All shaft #1 - fence site
76. Aug., 1984	Before: Trout-Scratch All adit #2 - fence site
77. Aug., 1984	Before: Trout-Scratch All shaft #3 - fence site
78. July, 1983	Before: True site - view of Imperial Mill
79. July, 1983	Before: True shaft - oreshoot
80. July, 1983	Before: True shaft - fence site

